

## Release Notes

# T.A8.4401-02s01 TomTec-Arena™ 1.1.1 including Hotfix (1266)

## What you should know about the new release

Congratulations to the purchase of your new TomTec Software TomTec-Arena and thank you for choosing TomTec Imaging Systems GmbH as your partner. In addition to the manual and training of our application specialists we would like to inform you about some product details in this release note.

### Clinical application packages (CAPs)

- Image-Com 5.2.1
- 4D LV-Function 3.1.2
- 4D LV-Analysis 3.1.2
- 4D RV-Function 1.2.2
- 4D Cardio-View 3.0.3
- 4D MV-Assessment 2.3.2
- Echo-Com 5.0.2
- 2D Cardiac-Performance Analysis 1.2.1
- 2D Cardiac-Performance Analysis MR 1.0.1
- 4D Sono-Scan 2.0.13

### Hotfix (1266)

Image-Com 5.2.1 shall only be used in combination with the Hotfix (1266).

To verify the Hotfix is installed open the file CalcEngineDefinition.xml located in the folder ImageCom. The first line shall contain following entry:

```
<!-- Hotfix for CAPAERROR-1266 -->
```

Please contact your sales representative in case this entry is not present.

## Changes to previous release

Module	Function	Description
<b>Image-Com</b> <b>4D LV-Analysis</b> <b>4D LV-Function</b> <b>4D Cardio-View</b> <b>4D RV-Function</b> <b>4D MV-Assessment</b>	<b>Philips 3D EpiQ/Elite data loader</b>	3D data from Philips EpiQ/Elite systems are supported in 4D CAPs. Implicit and explicit transfer syntax is supported for 3D Philips data in general.
<b>4D LV-Analysis/4D LV-Function</b>	<b>Tracking</b>	Tracking enhancements have been implemented for more robustness of results.
<b>4D LV-Analysis</b>	<b>Export</b>	Calculations of timings for ED/ES or T2P parameters are explained.
<b>2D CPA</b>	<b>DICOM HP Sonos clips</b>	Pixel aspect ratio is used for image calibration
<b>2D CPA</b>	<b>DICOM clip loader</b>	YBR_FULL_422 encoding is supported
<b>2D CPA</b>	<b>Export files</b>	Result.ini file for findings supports regional settings in terms of decimal separator
<b>2D CPA</b>	<b>Segmental export files</b>	Txt and xml export files: calculation of stddev is corrected
<b>2D CPA</b>	<b>export files</b>	Study information now available in both, regional and segmental, exports
<b>Image-Com</b>	<b>Philips 3D CX50 data loader</b>	3D data from Philips CX50 systems are supported in Image-Com. 4D CAPs have supported this format before via Image-Arena.
<b>Image-Com</b>	<b>Digital Subtraction Angiography (DSA)</b>	XA images can be displayed in DSA mode. For detailed information of all features please refer to the manual.
<b>Image-Com</b>	<b>Biplane XA image display</b>	Biplane XA images are displayed side-by-side.
<b>Image-Com</b>	<b>Measurement list</b>	There is a new measurement list, which lists all available measurements. The list can be exported to PDF or printed.
<b>Image-Com</b>	<b>CAP Results</b>	All main CAP results are taken over to the Worksheet and the measurement list.

## Resolved Error Reports

Module	Error ID	Description
<b>Image-Com</b>	<b>CAPAERROR-1266</b>	<p>Error in the Tricuspid Valve, TR PISA calculations.</p> <p>Involved measurements:</p> <ul style="list-style-type: none"> <li>• PISA Flow Rate</li> <li>• PISA ERO Area</li> <li>• PISA Reg. Volume</li> <li>• PISA Reg. Fraction</li> </ul>



		The Error is resolved by Hotfix 1266
<b>4D LV-Analysis/4D LV-Function</b>	<b>CAPAERROR-421</b>	Tracking algorithm handles extreme contraction e.g. in stress echo
<b>2D CPA</b>	<b>CAPAERROR-1220</b>	Results are sent correctly to FR
<b>2D CPA</b>	<b>CAPAERROR-1119</b> <b>CAPAERROR-991</b>	Freeze due to SC-dialog appearing in background => dialog was removed in CAPdII
<b>2D CPA</b>	<b>CAPAERROR-1113</b>	Wrong volume measurement in Sonoscan7500 data => DICOMtag is now correctly interpreted
<b>4D LV-Analysis</b> <b>4D LV-Function</b> <b>4D Cardio-View</b> <b>4D RV-Function</b> <b>4D MV-Assessment</b>	<b>CAPAERROR-1174</b>	4D CAPs cannot open IE33 3D data
<b>4D RV-Function</b>	<b>CAPAERROR-1162</b>	4D RV-Function 1.2 cannot open files with more than 30 MB
<b>4D RV-Function</b>	<b>CAPAERROR-833</b>	Dataset with two beats and 41-44 Frames cannot be open

## Language Support

TomTec-Arena CAPs support the following languages<sup>1</sup>:

- English
- French
- Spanish
- Italian
- German
- Korean<sup>2</sup>
- Japanese
- Chinese traditional/simplified
- Dutch
- Portuguese (Brazilian)
- Turkish<sup>2</sup>
- Swedish

## Hints

Module	Function	Description
<b>All CAPs</b>	<b>Documentation</b>	The TomTec-Arena manual and

<sup>1</sup> 4D RV-Function CAP: EFIGS+SWE only (manuals available in JAP and KOR additionally), 4D Sono-Scan CAP: EFIGS only, 2D CPA MR CAP: English only.

<sup>2</sup> English GUI, localized manual only



		customer documentation is available via the about box of Image-Com.
<b>All CAPs</b>	<b>Keyboard shortcuts</b>	Keyboard shortcuts are only available for Platform 5.0 and higher.
<b>All CAPs</b>	<b>ECG display</b>	ECG information is only displayed, if information is offered by US device.
<b>All CAPs (except 2D CPA)</b>	<b>Render presets</b>	There is a known issue regarding the preset functionality. The name of the loaded preset will not be changed to "NONE" automatically after changes on image settings.
<b>All CAPs (except 2D CPA)</b>	<b>Application launch</b>	The application does only start when all monitors connected to the system are set to 32 bit color depth.
<b>All CAPs</b>	<b>Application launch</b>	There is a known issue when the application is started the first time after a system reboot. On some systems the first attempt to start the application out of Image-Arena may not work, but a verification error might be displayed instead.
<b>All CAPs (except 2D CPA)</b>	<b>AVI export</b>	There is a known issue regarding exported AVI clips on systems containing NVIDIA Quadro graphic cards. Exported AVIs may show peculiar artifacts like a frozen rectangle in the center. The error is caused by a certain NVIDIA 3D-setting which may be present in some driver versions. The settings can also be used as a workaround for customers who are experiencing that error. The setting is called "Unified Back Buffer" (found in NVIDIA settings → 3D Settings) and must be set to "off" or "false" in order to prevent the error.
<b>2D CPA</b>	<b>GLS/GCS calculation</b>	Calculation is only done and result is only displayed if R-waves have either been detected automatically from the DICOM information of the clip or if the R-waves have been set manually by the user (on the M-Mode / Period Selection page).
<b>2D CPA</b>	<b>LV mass calculation</b>	Calculation is only done and result is only displayed if endo- and epicard are selected.
<b>2D CPA</b>	<b>Installation with Windows XP</b>	Redistributables from 'ToInstall-MS-Libs' folder have to be installed manually.
<b>2D CPA MR</b>	<b>Platform compatibility</b>	Only available for Image-Arena 4.6.x single seat installation
<b>2D CPA MR</b>	<b>History file</b>	Archiving of history file not implemented



<b>2D CPA MR</b>	<b>Operating system</b>	Win8 compatible with client-based installations only
<b>2D CPA/ 2D CPA MR</b>	<b>Bookmarks</b>	Don` t use bookmark function immediately prior or after drawing contour, but only on result pages
<b>4D Cardio-View</b>	<b>LV measurement</b>	The LV mass will only be added to the ED contour
<b>4D Cardio-View</b>	<b>LV measurement</b>	<p>The contours of the volume measurements have to:</p> <ul style="list-style-type: none"> <li>- intersect the LAX</li> <li>- have the right apical orientation</li> <li>- have no self-intersection</li> </ul> <p>Use the zoom or the single tiling if you want to add annotations to an image with existing measurements (to avoid getting into the catch area of the measurement editing).</p>
<b>Echo-Com</b>	<b>Study type</b>	Echo-Com does only work with protocol acquired stress echo studies. In case the platform does not recognize a stress echo study please check, if study type is stress echo.
<b>4D RV-Function</b>	<b>Data support</b>	Do not use data sets with trigger delay for contraction analysis. This might lead to an incorrect calculation of the regional minima.
<b>4D RV-Function</b>	<b>Data support</b>	The software does not support single frame dataset and may crash.
<b>4D RV-Function</b>	<b>Export</b>	Using the "Export data" functionality to transfer a csv.file on the hard disk make sure that the endocardial contour has to fit in each single phase. Please check all SAX in „Contour Revision“. Additional is necessary to check the regional country setting regarding to display the values in a correct way.
<b>4D RV-Function</b>	<b>Export</b>	Measurement export in the 4D RV-Function© 1.2 workflow step can only be done after activating one of the tiles.
<b>4D RV-Function</b>	<b>Border tracking</b>	The automatic contrast images recognition can under certain circumstances lead to an incorrect detection of the image. Please contact your TomTec representative if you are using contrast data and experience unexpected behavior of the automatic border tracking.
<b>4D Sono-Scan</b>	<b>Data support</b>	No compressed GE datasets are supported. Please configure the DICOM settings of the ultrasound system accordingly.



<b>4D Sono-Scan</b>	<b>Bookmark support</b>	Due to technical constraints the bookmarks which were created on the ultrasound system are ignored. Hence, the dataset comes up in a default state in 4D Sono-Scan. You can save new bookmarks, though, in the 4D Sono-Scan application.
<b>4D Sono-Scan</b>	<b>Data support</b>	<ul style="list-style-type: none"> <li>Greyscale datasets:</li> <li>Toshiba (Xario, Xario XG, Aplio XG)</li> <li>Zonare (Z.ONE)</li> <li>General Electric (Voluson, Logiq)</li> <li>Philips (IU22)</li> <li>Visualsonics (Vevo)</li> <li>Alpinion (E-Cube)</li> <li>DICOM 3D</li> <li></li> <li>Doppler datasets:</li> <li>General Electric (Voluson, Logiq)</li> <li>Toshiba (Xario, Xario XG, Aplio XG)</li> <li>DICOM 3D</li> </ul>
<b>Image-Com</b>	<b>Secondary captures</b>	The creation of animated secondary captures may take a while due to the large amount of image data to be processed. A rotating waiting widget is being displayed while the creation of the secondary capture is in progress.
<b>Image-Com</b>	<b>Secondary captures</b>	Animated clips are captured as AVI files at a constant speed that does not reflect the current playback speed of the clips.
<b>Image-Com</b>	<b>Measurement multiplicity</b>	For each value a multiplicity up to 5 is possible. In case more results are measured or transferred by the CAPS, the oldest values will be deleted and the new ones will be filled up subsequently (first in - first out).
<b>Image-Com</b>	<b>Annotations</b>	The "Annotation" function is not available for unicode languages (e.g. Chinese, Japanese, Korean).
<b>Image-Com</b>	<b>LV Simpson biplane measurement</b>	For using the enhanced workflow the applied multicycle clips need to contain R trigger information in the DICOM file, otherwise the suggestion for LV contours might not work reliably. Clips which do not contain R trigger information should be analyzed manually.
<b>Image-Com</b>	<b>LV Simpson biplane measurement</b>	The enhanced workflow does not work with clips containing contrast agent information.



<b>4D MV-Assessment</b>	<b>HPSonos live format</b>	The HPSonos Live format is not supported.
<b>4D MV-Assessment</b>	<b>Bookmarks</b>	MV-A 2.1 bookmarks aren't compatible
<b>4D LV-Analysis/Function</b>	<b>Toshiba Artida format</b>	Toshiba Artida ,single clip' format is not supported, 'full clip' format can be loaded
<b>4D LV-Analysis/Function</b>	<b>Bookmarks</b>	Bookmarks from LV 3.0 cannot be loaded.

## Known Bugs

Module	Description
<b>4D RV-Function</b>	In Contour Revision the Coronal view may disappear if you move up or down the SAX cut plane in the LAX view too far. You just need then to click on "Reset SAX".
<b>2D CPA</b>	CPA plays loop in slow motion for high resolution data, unresolved in 32bit
<b>4D Sono-Scan</b>	No warning message is displayed when a bookmark cannot be saved due to a full hard disk drive.
<b>4D MV-Assessment</b>	The string "None" in Japanese GUI is cut.
<b>4D LV-Analysis</b>	Empty files are stored using a full media for 'Beutel Export' and 'Export results'
<b>4D LV-Analysis</b>	The referred formula for radial strain in the manual in section LV-Analysis CAP is wrong. The applied formula is: Radial component is tracked and measured in the sub-endocardial zone with a thickness of 1/32 of the end-diastolic longitudinal contour length.
<b>4D Cardio-View</b>	TEE datasets are orientated with Apex upside. Customer has to rotate the dataset.
<b>Image-Com</b>	The manual input fields (HR, Aliasing Velocity and RAP) of the measurement menu do not support decimal places correctly. To insert values with decimal places for e.g. the Aliasing velocity use the respective fields inside the worksheet.

